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# MINERAL INDUSTRY SURVEYS

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## PRECIOUS METALS IN DECEMBER 1997

U.S. mines produced 29,500 kilograms of gold and 139,000 kilograms of silver in December 1997. Production of gold was down by 8% in California.

### Gold

**Domestic.**—The Nevada Mining Association's new president expects that low gold prices will keep Nevada's gold production from increasing in 1998 (Platt's Metals Week, 1998c). Nevada produced almost 243,000 kilograms (kg) of gold in 1997.

Handy & Harman (H&H) rejected steel maker WHX's takeover offer. H&H has recently moved away from its century-old image as a precious metals refiner and fabricator. Last year, the company spun off its refining arm and has repositioned itself more as a diversified materials and manufacturing company (Metal Bulletin, 1998a).

Pegasus Gold Inc. filed for reorganization under Chapter 11 bankruptcy protection, citing the 18½-year low gold price as the reason. Pegasus closed out most of its gold and other hedge contracts, but still had about 1,500 kg of gold hedged at an average of \$524 per ounce of gold (Metal Bulletin, 1998b).

**International.**—South Koreans reportedly gathered about 17,000 kg of gold in only 3 days to boost the country's dwindling foreign exchange coffers, thereby alleviating the shortage of foreign currency. Korean Zinc Co. Ltd. is expected to refine the gold, which will be exported by Daewood Corp. Falling international gold prices were attributed to increased concerns about more exports of gold from South Korea (American Metal Market, 1998b).

Marubeni Corp. and Mitsubishi Materials Corp. have contracted to install a \$120 million high-angle belt conveyor system at Muruntau, Uzbekistan's largest gold mine, in 2002. The system pulverizes ores mined from the open pit and transports them on a continuous conveyor to the point of shipment. Muruntau gold ore is shipped to the Navoi smelting

combine, which currently produces about 50,000 kg of gold per year. Uzbekistan is the world's seventh largest gold producer (American Metal Market, 1998c).

The World Gold Council reported that the Gulf Emirate of Dubai remained the world's top gold trading center in 1997 as a surge in regional demand boosted imports to an all-time high. Dubai gold purchases rose 85% to an estimated 650 tons of gold in 1997 from 350 tons of gold in 1996. The surge in consumption was reportedly caused by an easing of gold restrictions on gold imports by India, the decline in gold prices, and cuts in customs tariffs in other countries (Platt's Metals Week, 1998a).

**Update.**—There was an increase in gold business during December on the London bullion market. The average daily turnover rose to 1.4 million kilograms of gold, up about 7% from November. This figure represents a 47% increase over the daily turnover for October 1996 (American Metal Market, 1998a).

Merrill Lynch, in its *Outlook for Global Commodity Markets* sees increased volatility in the gold market in 1998, with likely price spikes to a high of \$350 per ounce of gold and to a low of \$250 per ounce of gold in a bear market that is unlikely to end for another 2 to 3 years (Platt's Metals Week, 1998b).

According to a report by Bannock Consulting, commissioned by the World Gold Council, government regulations and discriminatory taxation distort the gold market and limit gold trade. The report stated also that only two countries, Hong Kong and Dubai, operate a free gold market, and that the removal of unnecessary and discriminatory barriers in other countries would lead to an upsurge in the trading and consumption of gold and increased revenue for many governments. The study suggested three fears that contribute to gold's overregulation. The first fear is that gold deregulation could lead to or exacerbate exchange rate instability; even

though, the report claims, gold transactions no longer have the potential to upset the exchange markets. The second fear is that gold deregulation could lead to a loss of domestic monetary control, even though gold transactions in any country are very small in relation to the total money supply. The final fear is that gold deregulation could lead to an increase in illicit or underground trade in both the gold and non-gold sectors, even though the opposite is true, in that regulation itself drives the gold sector into the unofficial economy and encourages the web of illicit transactions to spread from itself (Metal Bulletin, 1998c).

## Silver

Silver producers are predicting increases in production of silver in each of the next 3 years. These increases will be in response to growing worldwide demand, which has risen 14% over the past 7 years. Silver production is expected to rise from 16,047 tons in 1997 to 17,800 tons by 2000, according to *World Mine Production Forecast 1997-2000*, published by the Silver Institute. According to the study, Mexico, Peru, and the United States will remain the three largest silver-producing nations. This is a change from last year's forecast, when Australian producers predicted they would outpace U.S. production in 1999 by about 124 tons. Mexican producers estimate they will produce 3,110 tons of silver in 1998, rising to 3,453 tons by 2000. Peru and the United States will tie for second place at 2,022 tons, and Australia will be the third largest producer at 1,649 tons.

According to the study, production of silver from primary mines (i.e., silver mines) responds to prices, which were lower earlier this year. However, the study points out that only 17% of silver was produced by primary mines. Eighty-three percent of silver production was a byproduct of lead, zinc, copper, and gold mining. Byproduct silver production is dependent on production of the primary metal and not on the price of silver. Gold prices have been considerably lower this year, and should that trend continue, some reductions in the production of silver from gold mines could occur (Silver News, 1997).

**Price of silver increases sharply.**—The price of silver rose to \$6.05 per troy ounce in London on December 11, 1997, and then fluctuated wildly on the COMEX, where the spot price rose 43.2¢ to \$5.872 per ounce. The sharp

upswing came in the wake of dwindling inventories on the COMEX. COMEX warehouse silver stocks fell from 6,345 tons on June 6, 1997 to 3,863 tons by December 11. Most analysts are reported to believe that firming demand may not be the only reason for the fall in inventories and that some element of manipulation could be involved. Others believe that there are good fundamentals for silver and that the metal is being consumed (Platt's Metals Week, 1997).

## Platinum-Group Metals

Demand for platinum is expected to decline in Japan in 1998, owing to sagging jewelry sales. Demand for palladium is likely to rise, owing to stronger demand for use in auto catalysts. In order to meet strict U.S. vehicle emissions standards, Japanese automakers will have to use more palladium in their auto catalysts for models to be exported to the U.S. Jewelry industry analyst expects retail jewelry sales in Japan to fall 15% in 1997 to 1.77 trillion yen, as consumers grow more pessimistic about the outlook for the economy in Japan and spend less money on luxury items (Takada, 1998).

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TABLE 1  
MINE PRODUCTION OF RECOVERABLE GOLD AND SILVER IN THE UNITED STATES, BY STATE 1/

(Kilograms)

	Arizona	California	Montana	Nevada	Other States 2/	Total
<b>Gold:</b>						
1996:						
December	124	1,980	876	19,800	5,210	28,000
Jan.-Dec.	1,740	23,800	9,110	213,000	69,900	318,000
1997: p/						
January	W	1,800	948	18,500	5,600	26,900
February	W	1,800	659	16,400	5,430	24,300
March	W	1,850	671	20,400	5,310	28,200
April	W	1,850	618	18,900	5,730	27,100
May	102	1,830	640	19,700	5,970	28,300
June	74	1,770	W	21,000	6,020	28,900
July	W	1,790	648	20,700	5,620	28,800
August	W	1,800	474	20,600	5,440	28,300
September	W	1,790	632	20,600	5,310	28,300
October	W	1,730	W	22,400	6,140 r/	30,300 r/
November	W	1,890 r/	W	22,200	5,800 r/	29,800
December	W	1,740	W	21,500	6,240	29,500
Jan.-Dec.	176	21,600	5,290	243,000	56,600	339,000
<b>Silver:</b>						
1996:						
December	14,100	1,250	17,800	58,300	34,800	126,000
Jan.-Dec.	188,000	21,600	229,000	605,000	530,000	1,570,000
1997: p/						
January	11,200	1,560	W	63,000	61,700	138,000
February	10,300	1,530	W	44,700	62,100	119,000
March	14,700	1,810	W	60,200	56,800	133,000
April	12,600	2,110	W	56,500	62,900	134,000
May	15,800 r/	1,880	W	45,400	67,700	131,000 r/
June	14,600	1,720	W	58,800	61,800	137,000
July	15,300 r/	W	W	57,000	60,800	133,000 r/
August	16,700 r/	W	W	64,600	62,700	144,000 r/
September	14,800 r/	W	W	80,700	65,400	161,000 r/
October	14,200 r/	W	W	70,700	62,000	147,000 r/
November	14,200 r/	W	W	62,700	65,900 r/	143,000 r/
December	13,600	W	W	60,400	64,800	139,000
Jan.-Dec.	168,000	10,600	W	725,000	690,000	1,520,000

p/ Preliminary. r/ Revised. W Withheld to avoid disclosing company proprietary data; included with "Other States."

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes Alaska, Colorado, Idaho, New Mexico, South Carolina, South Dakota, Utah, Wisconsin, and States indicated by symbol "W."

3/ Includes Alaska, Colorado, Michigan, Missouri, Montana, New Mexico, New York, South Carolina, South Dakota, Utah, Wisconsin, and States indicated by symbol "W."

TABLE 2  
SELECTED PRECIOUS METAL PRICES

(Dollars per troy ounce)

	Gold	Silver	Platinum	Palladium
<u>Engelhard Industries:</u>				
<u>1996:</u>				
<u>Year:</u>				
Low/date	368.67 (Dec. 03)	4.67 (Dec.03)	368.00 (Dec. 16)	117.00
High/date	391.06 (Aug. 05)	5.82 (Feb.02)	433.00 (Feb. 05)	146.00
Average	389.08	5.20	397.97	130.39
<u>1997:</u>				
<u>November:</u>				
Low/date	298.15/26	4.83/07	384.00/25	214.00
High/date	316.54/04	5.39/21	411.00/04	220.00
Average	308.27	5.06	396.38	217.05
<u>December:</u>				
Low/date	284.13/12	5.20/01	345.00/16	186.00
High/date	297.85/24	6.20/29	391.00/03	216.00
Average	290.28	5.74	369.09	203.04
<u>Year to date:</u>				
Low/date	298.15 (Nov. 26)	4.22 (July 08)	345.00 (Dec. 16)	177.00
High/date	367.82 (Jan. 01)	6.20 (Dec. 29)	490.00 (June 06 & 09)	246.00
Average	333.40	4.90	396.58	184.14
<u>1998:</u>				
<u>January:</u>				
Low/date	279.82/09	5.48/12	363.00/13	205.00
High/date	306.02/30	6.28/30	394.00/29	245.00
Average	290.58	5.85	377.15	229.55
<u>Handy and Harman:</u>				
<u>1996:</u>				
Average	387.81	5.18	XX	XX
<u>1997:</u>				
November	307.10	5.06	XX	XX
December	288.65	5.71	XX	XX
Average	331.16	4.89	XX	XX
<u>1998:</u>				
January	289.18	5.84	XX	XX
<u>London Final:</u>				
<u>1996:</u>				
Average	387.70	5.20	XX	XX
<u>1997:</u>				
November	324.87	5.04	XX	XX
December	306.03	5.07	XX	XX
Average	331.15	4.90	XX	XX
<u>1998:</u>				
January	289.09	5.87	XX	XX

XX Not applicable.

Source: Platt's Metals Week.

TABLE 3  
U.S. IMPORTS AND EXPORTS OF GOLD, BY COUNTRY 1/

(Kilograms of gold content, unless otherwise specified)

Country	Ores and concentrates 2/	Dore and precipitates	Refined bullion 3/	Total	Waste and scrap 4/ (gross weight)
<b>Imports for consumption:</b>					
1996	3,460	11,900	143,000	159,000	13,000
1997:					
September	114	1,400	17,800	19,300	1,180
October	4	1,260	9,690	11,000	1,200
November:					
Brazil	--	--	2,490	2,490	--
Canada	23	273	12,100	12,400	58
Chile	--	--	537	537	--
Colombia	--	--	170	170	83
Dominican Republic	--	--	28	28	338
Korea, Republic of	--	--	1,000	1,000	1
Mexico	--	406	211	617	147
Peru	--	--	447	447	11
Switzerland	--	--	806	806	--
Other	--	297	482	779	444
Total	23	976	18,300	19,300	1,080
Year to date	1,520	13,000	177,000	192,000	11,600
<b>Exports:</b>					
1996	374	65,100	406,000	471,000	89,900
1997:					
September	56	8,730	16,300	25,100	5,670
October	59	6,900	17,100	24,100	6,050
November:					
Canada	27	571	366	964	2,700
France	--	--	--	--	816
Germany	6	--	530	535	8
Korea, Republic of	--	--	10	10	--
Mexico	--	--	1,840	1,840	--
Switzerland	--	7,280	--	7,280	--
United Kingdom	--	5,790	5,660	11,400	810
Other	--	--	418	418	583
Total	33	13,600	8,820	22,500	4,920
Year to date	426	76,500	365,000	442,000	55,600

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes gold content of base metal ores, concentrates, and matte imported for refining.

3/ Bullion also moves in both directions between U.S. markets and foreign stocks on deposit in the Federal Reserve Bank. Monetary gold excluded.

4/ "Waste and scrap" not included in "Total."

Source: Bureau of the Census.

TABLE 4  
U.S. IMPORTS AND EXPORTS OF SILVER, BY COUNTRY 1/

(Kilograms of silver content, unless otherwise specified)

Country	Ores and concentrates 2/	Doré and precipitates	Refined bullion	Total	Waste and scrap 3/ (gross weight)
Imports for consumption:					
1996	153,000	281,000	2,580,000	3,010,000	1,810,000
1997:					
September	15,700	21,600	170,000	208,000	89,600
October	432	22,100	134,000	156,000	123,000
November:					
Canada	--	--	87,200	87,200	15,800
Chile	--	12,100	3,870	15,900	--
Germany	--	--	6	6	17,800
Malaysia	--	--	--	--	14,300
Mexico	--	484	78,000	78,500	--
Papua New Guinea	--	--	--	--	9,430
Peru	--	--	26,000	26,000	--
Philippines	--	--	--	--	9,170
South Africa	--	--	--	--	11,100
Other	--	82	179	261	1,160
Total	--	12,600	195,000	208,000	78,700
Year to date	113,000	266,000	1,870,000	2,250,000	1,240,000
Exports:					
1996	1,520 r/	43,300	2,900,000 4/	2,950,000	1,280,000
1997:					
September	173	3,650	299,000	303,000	103,000
October	720	3,290	111,000	115,000	96,300
November:					
Belgium	--	--	--	--	24,100
Canada	--	--	23,800	23,800	23,100
China	--	1,460	--	1,460	5,510
Germany	--	--	--	--	2,700
India	--	--	18,300	18,300	242
Italy	--	--	--	--	13,000
Japan	--	--	--	--	21,500
Sweden	--	--	--	--	5,420
Taiwan	--	2,500	--	2,500	9
United Kingdom	--	--	147,000	147,000	6,030
Uruguay	--	--	4,060	4,060	--
Other	250	18	43	311	413
Total	250	3,980	194,000	198,000	102,000
Year to date	30,200	61,300	2,400,000	2,490,000	936,000

r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes silver content of base metal ores, concentrates, and matte imported for refining.

3/ "Waste and scrap" not included in "Total."

4/ Verification of Bureau of the Census exports was not possible for some months of 1996.

Source: Bureau of the Census.

TABLE 5  
U.S. IMPORTS AND EXPORTS OF PLATINUM-GROUP METALS, BY COUNTRY 1/

(Kilograms of metal content, unless otherwise specified)

Country	Ores and concentrates	Waste and scrap (gross weight)	Refined					Osmium	Ruthenium
			Platinum	Palladium	Rhodium	Iridium			
Imports for consumption:									
1996	1,960	5,060	73,700 2/	146,000	9,650	1,810	329	15,600	
1997:									
September	--	345	6,540	15,200	5,720	133	--	1,790	
October	--	633	7,140	16,000	1,240	161	--	774	
November:									
Australia	--	--		763	--	--	--	--	
Belgium	--	--	1,260	408	22	--	--	--	
Canada	--	52	77	206	130	--	--	--	
France	--	23	--	--	--	--	--	--	
Germany	--	--	457	448	40	57	--	21	
Italy	--	81	--	1,100	--	--	--	--	
Japan	--	--	--	860	--	--	--	--	
Netherlands	--	--	179	--	--	--	--	--	
Norway	--	--	23	150	2	--	--	--	
Russia	--	--	29	10,800	207	--	--	--	
South Africa	--	--	4,700	1,600	532	73	--	327	
Switzerland	--	--	85	868	--	--	--	62	
United Kingdom	--	216	399	409	3	55	--	117	
Other	--	22	81	763	--	4	--	--	
Total	--	394	7,300	17,600	936	189	--	526	
Year to date	--	4,960	69,800	119,000	12,100	1,530	54	10,800	
Exports:									
1996	484	8,640	12,700	26,700	196	123 3/			
1997:									
September	20	630	1,720	2,810	8	67 3/			
October	2	943	1,220	3,490	13	35 3/			
November:									
Australia	--	--	1	--	--	--			
Belgium	--	157	246	655	--	--			
Canada	--	7	44	74	--	--			
France	--	--	25	1	--	1 3/			
Germany	--	25	29	112	--	--			
Italy	--	4	90	30	--	--			
Japan	--	124	107	89	--	--			
Korea, Republic of	--	--	76	173	25	5 3/			
Mexico	1	2	3	811	--	--			
Netherlands	--	--	19	90	--	1 3/			
Switzerland	--	--	3	--	--	--			
Taiwan	--	--	43	45	--	2 3/			
United Kingdom	135	698	58	133	1	9 3/			
Other	--	--	105	319	--	--			
Total	136	1,020	849	2,530	26	18 3/			
Year to date	684	12,100	20,600	39,500	186	570 3/			

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Of this amount, 2,070 kilograms was in the form of platinum coins.

3/ Includes osmium and ruthenium.

Source: Bureau of the Census.